

ABSTRACT

A multi-resolution filter is provided that may be used to attenuate aliasing artifacts in a digital input signal, such as a digital image acquired by a digital camera. The multi-resolution filter reduces the resolution of the digital input signal and filters the reduced resolution signal using a median filter. The output of the median filter is provided to an interpolation filter, which increases the resolution of the median filter's output to produce a digital output signal in which aliasing artifacts from the digital input signal have been attenuated. The multi-resolution filter may be advantageously applied to the chrominance channels of digital images to attenuate aliasing artifacts without undesirably blurring sharp luminance and color boundaries in the digital image. Furthermore, the computational expense associated with the median filter is diminished by reducing the resolution of the digital input signal before filtering it using the median filter.

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